



X-Plain™

Epstein-Barr Virus

Reference Summary

Epstein-Barr virus is a member of the herpes virus family and one of the most common human viruses.

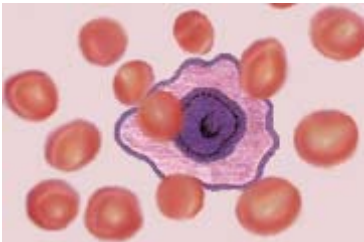
In the United States, 95% of adults between 35-40 years of age have already been infected with Epstein-Barr virus.

This reference summary will help you understand Epstein-Barr virus and how it can be treated.

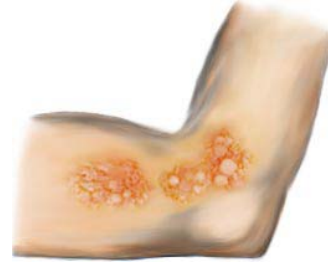
Epstein-Barr Virus

Viruses are among the smallest infectious agents. Unlike bacteria, viruses cannot multiply on their own.

They have to infect a cell in order to multiply. Epstein-Barr virus is a member of the herpes virus family.



Herpes viruses cause symptoms such as cold sores. When a person becomes infected with a virus, their immune system defends their body against the virus. The immune system stops the infection and tries to prevent future ones.



Antibodies are special chemicals the body uses to defend itself. They are very specific to the material they intend to attack, whether it is a virus, bacteria, or any other foreign material in the body.

White blood cells make antibodies. White blood cells are a type of blood cell responsible for fighting infections.

After attaching to the invading virus, antibodies cause other white blood cells to attack the virus and destroy it.

When a person becomes infected with a virus, their immune system defends their body against the virus. This is why most people infected with Epstein-Barr virus do not become very ill.

Symptoms

The Epstein-Barr virus occurs all over the world, and most people become infected with Epstein-Barr virus at some point during their lives.

Children sometimes become infected with Epstein-Barr virus. These infections usually either cause no symptoms or are impossible to tell apart from the other mild, brief illnesses of childhood.

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In the United States and in other developed countries, many people are NOT infected with Epstein-Barr virus as children. When teenagers get Epstein-Barr virus, there is a 35-50% chance that it will lead to *infectious mononucleosis*, also called mono.

Symptoms of mono include

- fever
- sore throat
- swollen lymph glands

Sometimes, the spleen and liver may become swollen.

Mono very rarely causes heart and central nervous system problems and it is almost never fatal. Epstein-Barr virus is not known to cause problems such as miscarriages or birth defects during pregnancy.

Although the symptoms of infectious mononucleosis usually go away in 1-2 months, Epstein-Barr virus remains dormant, or hidden. It hides in the throat and blood cells for the rest of the person's life.

Every so often, Epstein-Barr virus may become active again and is found in the saliva of infected persons. Usually no symptoms accompany reactivation of Epstein-Barr virus.

Two types of cancers, Burkitt's lymphoma and nasopharyngeal carcinoma occur in a very small number of Epstein-Barr carriers. Epstein-Barr virus seems to play an important role in the development of these cancers, but is probably not the only cause.

Most people have already been infected with Epstein-Barr virus, so if they are exposed to someone who has mono they are not at risk of getting it. Transmission of Epstein-Barr virus requires direct contact with saliva from the

mouth of an infected person; this is why mono is also called "the kissing disease".

It usually takes 4-6 weeks after getting infected before symptoms of mono are noticed. Persons with infectious mononucleosis may be able to spread the infection to others for several weeks. No special precautions or isolation procedures are recommended for people with mono since healthy people often have Epstein-Barr virus in their saliva anyway. Many healthy people carry and spread Epstein-Barr virus periodically throughout life. For this reason, it is almost impossible to prevent others from getting it.

Diagnosis & Treatment

The diagnosis of infectious mononucleosis is made if the patient is young and has symptoms including

- fever
- sore throat
- pharyngitis
- swollen lymph glands, or lymphadenopathy



Usually, blood tests are needed to confirm whether a person has infectious mononucleosis. Blood tests check for an elevated white blood cell count, an increased percentage of atypical white blood cells, and a positive reaction to a *mono spot test*.

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There is no specific treatment for infectious mononucleosis, other than treating the symptoms. Some doctors prescribe a 5-day course of steroids to control throat and tonsil swelling. There are no antiviral drugs or vaccines available.

Symptoms of mono caused by Epstein-Barr virus infection rarely last more than 4 months. If they last more than 6 months, it is called chronic EBV infection. However, evidence of active EBV infection is seldom found after that long.

Summary

Epstein-Barr virus is a very common virus that infects about 95% of all people.

At times, Epstein-Barr virus can result in sore throat, pharyngitis, and lymphadenopathy. Together, these symptoms are called *infectious mononucleosis*.

Patients with infectious mononucleosis usually get better in a few weeks without specific treatment.

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